

FIG. 1 (SEQ ID NOS: 1 and 5)

1 GAGGTCCAGC TTCAGCAGTC TGGACCTGAC CTGGTGAAGC CTGGGGCTTC
 E V Q L Q Q S G P D L V K P G A S
 51 AGTGAAGATA TCCTGCAAGG CTTCTGGTTA CTCATTCACT GGCTACTACA
 V K I S C K A S G Y S F T G Y Y
 101 TGCACTGGGT GAAGCAGAGC CATGGAAAGA GCCTTGAGTG GATTGGACGT
 M H W V K Q S H G K S L E W I G R
 151 ATTAATCCTA ACAATGGTGT TACTCTCTAC AACAGAAAAT TCAAGGACAA
 I N P N N G V T L Y N Q K F K D K
 201 GGCCATATTA ACTGTAGACA AGTCATCCAC CACAGCCTAC ATGGAGCTCC
 A I L T V D K S S T T A Y M E L
 251 GCAGCCTGAC ATCTGAGGAC TCTGCGGTCT ATTACTGTGC AAGATCTACT
 R S L T S E D S A V Y Y C A R S T
 301 ATGATTACGA ACTATGTTAT GGACTACTGG GGTCAAGTAA CCTCAGTCAC
 M I T N Y V M D Y W G Q V T S V T
 351 CGTCTCCTCA GGTGGTGGTG GGAGCGGTGG TGGCGGCACT GGCGGCCGGCG
 V S S G G G G S G G G G G T G G G
 401 GATCTAGTAT TGTGATGACC CAGACTCCA CATTCCCTGCT TGTTTCAGCA
 G S S I V M T Q T P T F L L V S A
 451 GGAGACAGGG TTACCATAAC CTGCAAGGCC AGTCAGAGTG TGAGTAATGA
 C D R V T I T C K A S Q S V S N D
 501 TGTAGDTTGG TACCAACAGA AGCCAGGGCA GTCTCCTACA CTGCTCATAT
 V A W Y Q Q K P C Q S P T L L I
 551 CCTATACATC CAGTCGCTAC GCTGGAGTCC CTGATCGCTT CATTGGCAGT
 S Y T S S R Y A G V P D R F I G S
 601 GGATATGGGA CGGATTTCAC TTTCACCATC AGCACTTGC AGGCTGAAGA
 G Y G T D F T F T I S T L Q A E D
 651 CCTGGCAGTT TATTTCTGTC AGCAAGATTA TAATTCTCCT CCGACGTTCG
 L A V Y F C Q Q D Y N S P P T F
 701 GTGGAGGCAC CAAGCTGGAA ATCAAACGG
 G G G T K L E I K R

FIG. 2 (SEQ IDNOS: 3 and 7)

ATGGGCCACA CACGGAGGCA GGGAACATCA CCATCCAAGT GTCCATACCT	50
M G H T R R Q G T S P S K C P Y L	
CAATTCTTT CAGCTCTTGG TGCTGGCTGG TCTTTCTCAC TTCTGTTCAG	100
N F F Q L L V L A G L S H F C S	
GTGTTATCCA CGTGACCAAG GAAGTGAAAG AAGTGGCAAC GCTGTCCTGT	150
G V I H V T K E V K E V A T L S C	
GGTCACAATG TTTCTGTTGA AGAGCTGGCA CAAACTCGCA TCTACTGGCA	200
G H N V S V E E L A Q T R I Y W Q	
AAAGGAGAAG AAAATGGTGC TGACTATGAT GTCTGGGGAC ATGAATATAT	250
K E K K M V L T M M S G D M N I	
GGCCCGAGTA CAAGAACCGG ACCATCTTG ATATCACTAA TAACCTCTCC	300
W P E Y K N R T I F D I T N N L S	
ATTGTGATCC TGGCTCTGCG CCCATCTGAC GAGGGCACAT ACGAGTGTGT	350
I V I L A L R P S D E G T Y E C V	
TGTTCTGAAG TATGAAAAAG ACGCTTCAA GCGGGAACAC CTGGCTGAAG	400
V L K Y E K D A F K R E H L A E	
TGACGTTATC AGTCAAAGCT GACTCCCTA CACCTAGTAT ATCTGACTTT	450
V T L S V K A D F P T P S I S D F	
GAAATTCCAA CTTCTAATAT TAGAAGGATA ATTGCTCAA CCTCTGGAGG	500
E T P T S N I R R I I C S T S G G	
TTTCCAGAG CCTCACCTCT CCTGGTTGGA AAATGGAGAA GAATTAAATG	550
F P E P H L S W L E N G E E L N	
CCATCAACAC AACAGTTCC CAAGATCCTG AAACTGAGCT CTATGCTGTT	600
A I N T T V S Q D P E T F I Y A V	
AGCAGCAAAC TGGATTTCAA TATGACAACC AACACAGCT TCATGTGTCT	650
S S K L D F N M T T N H S F M C L	
CATCAAGTAT GGACATTTAA GAGTGAATCA GACCTCAAC TGGAATACAA	700
I K Y G H L R V N Q T F N W N T	
CCAAGCAAGA GCATTTCCCT GATGGAGGCG GGGGATCCGA GGTCCAGCTT	750
T K Q E H F P D G G G G S E V Q L	

CAGCAGTCTG GACCTGACCT GGTGAAGCCT GGGGCTTCAG TGAAGATATC Q Q S G P D L V K P G A S V K I S	800
CTGCAAGGCT TCTGGTTACT CATTCACTGG CTACTACATG CACTGGGTGA C K A S G Y S F T G Y Y M H W V	850
AGCAGAGCCA TGGAAAGAGC CTTGAGTGGA TTGGACGTAT TAATCCTAAC K Q S H G K S L E W I G R I N P N	900
AATGGTGT TA CTCTCTACAA CCAGAAATT C AAGGACAAGG CCATATTAAC N G V T L Y N Q K F K D K A I L T	950
TGTAGACAAG TCATCCACCA CAGCCTACAT GGAGCTCCGC AGCCTGACAT V D K S S T T A Y M E L R S L T	1000
CTGACCACTC TCGGGTCTAT TACTGTGCAA GATCTACTAT GATTACGAAC S E D S A V Y Y C A R S T M I T N	1050
TATGTTATGG ACTACTCCCC TCAAGTAACC TCAGTCACCG TCTCCTCAGG Y V M D Y W G Q V T S V T V S S G	1100
TGGTGGTGGG AGCGGTGGTG GCGGCACTGC CGCCGGCGGA TCTAGTATTG G G G S G G G G T G G G G S S I	1150
TGATGACCCA GACTCCCACA TTCCTGCTTG TTTCAGCAGG AGACACCCCTT V M T Q T P T F L L V S A G D R V	1200
ACCATAACCT GCAAGGCCAG TCAGAGTGTG AGTAATGATG TAGCTTGGTA T I T C K A S Q S V S N D V A W Y	1250
CCAACAGAAG CCAGGGCAGT CTCCTACACT GCTCATATCC TATACATCCA Q Q K P G Q S P T L L I S Y T S	1300
GTCGCTACGC TGGAGTCCCT GATCGCTTCA TTGGCAGTGG ATATGGGACG S R Y A G V P D R F I G S G Y G T	1350
GATTCACCT TCACCATCAG CACTTGCAG GCTGAAGACC TGGCAGTTA D F T F T I S T L Q A E D L A V Y	1400
TTTCTGTCAG CAAGATTATA ATTCTCCTCC GACGTTGGT GGAGGCACCA F C Q Q D Y N S P P T F G G G T	1450
AGCTGGAAAT CAAATAA K L E I K	

FIG. 2_{CONT'D}

1 ATGGGACTGA GTAACATTCT CTTTGTGATG GCCTTCCTGC TCTCTGGTGC
 M G L S N I L F V M A F L L S G A
 51 TGCTCCTCTG AAGATTCAAG CTTATTCAA TGAGACTGCA GACCTGCCAT
 A P L K I Q A Y F N E T A D L P
 101 GCCAATTGCG AAACCTCTCAA AACCAAAGCC TGAGTGAGCT AGTAGTATTT
 C Q F A N S Q N Q S L S E L V V F
 151 TGGCAGGACC AGGAAAACCTT GGTTCTGAAT GAGGTATACT TAGGCAAAGA
 W Q D Q E N L V L N E V Y L G K E
 201 GAAATTTGAC AGTGTTCATT CCAAGTATAT GGGCCGCACA AGTTTGATT
 K F D S V H S K Y M G R T S F D
 251 CGGACAGTTG GACCTGAGA CTTCACAAATC TTCAGATCAA GGACAAGGGC
 S D S W T L R L H N L Q I K D K G
 301 TTGTATCAAT GTATCATCCA TCACAAAAAG CCCACAGGAA TGATTCGCAT
 L Y Q C I I H H K K P T G M I R I
 351 CCACCAGATG AATTCTGAAC TGTCAGTGCT TGCTAACTTC AGTCAACCTG
 H Q M N S E L S V L A N F S Q P
 401 AAATAGTACC AATTCTAAT ATAACAGAAA ATGTGTACAT AAATTTGACC
 E I V P I S N I T E N V Y I N L T
 451 TGCTCATCTA TACACGGTTA CCCAGAACCT AAGAAGATGA GTGTTTGCT
 C S S I H G Y P E P K K M S V L L
 501 AAGAACCAAG AATTCAACTA TCGAGTATGA TGGTATTATG CAGAAATCTC
 R T K N S T I E Y D G I M Q K S
 551 AAGATAATGT CACAGAACTG TACGACGTTT CCATCAGCTT GTCTGTTCA
 Q D N V T E L Y D V S I S L S V S
 601 TTCCCTGATG TTACGAGCAA TATGACCATC TTCTGTATTC TGAAACTGA
 F P D V T S N M T I F C I L E T D
 651 CAACACCCGG CTTTTATCTT CACCTTCCTC TATAGAGCTT GAGGACCCTC
 K T R L L S S P F S I E L E D P
 701 AGCCTCCCCC AGACCACATT CCTGGAGGCG GGGGATCC
 Q P P P D H I P G G G G S

FIG. 4 (SEQ ID NOS: 9 and 10)

FIG. 5 (SEQ ID NO: 11)

atggcttgca attgtcagtt gatgcaggat acaccactcc tcaagttcc atgtccaagg 60
 ctcattttc tctttgtct gctgattcg tttcacaaag tttcttcaga ttgttatgaa 120
 caactgtcca agtcaagtcaa agataaggta ttgtcgctt gccgttacaa ctctccgcat 180
 gaagatgagt ctgaagaccg aatctactgg caaaaacatg acaaagtggt gctgtctgtc 240
 attgctggaa aactaaaagt gtggcccgag tataagaacc ggactttata tgacaacact 300
 acctactctc ttatcatctt gggcctggc ctttcagacc ggggcacata cagctgtgtc 360
 gttcaaaaga agggaaaqaqq aacqtatqaa gttaaacact tggcttttagt aaagt.tgtcc 420
 atcaaagctg actctctac ccccaacata actgagtcg gaaacccatc tgcagacact 480
 aaaaggatta cctgtttgc ttccggggt ttcccaaagc ctgcgttctc ttggttggaa 540
 aatggaaag aattacctgg catcaatacg acaatttccc aggatctgtc atctgaattt 600
 tacaccatgtt gtagccaaact agatttcaat acaactgtc accacacat taagtgtctc 660
 attaaatatg gagatgtca cgtgtcagag gacttcaccc gggaaaaacc cccaaagac 720
 cctcctgata gcaagccccg ggggtgggg agccgggtg gccgcagtgg cggccggcgg 780
 actagtgggg tccagcttca gcagtcttgc cctgacccgg tgaagccctgg ggcttcactg 840
~~dayalalcc~~ gcaaggcttc tggttactca ttcaactggc actacatgc ctgggtgaag 900
 cagagccatg gaaagagcc tgagtggatt ggacgttata atccataacaa tggtgttact 960
 ctctacaacc agaaatttcaa ggacaaggcc atattaactg tagacaagtc atccaccaca 1020
 gcctacatgg agctcccgag cctgacatctt gaggactcg cggtcttata ctqtqcaqa 1080
 tctactatga ttacgaacta tggatggac tactggggc aagtaacttc agtcaccgtc 1140
 tcttcagggtg gtgggggg ggggtggc ggcactggcg gccgcggatc tagtattgt 1200
 atgaccacca ctcccacatt cctgttttgc tcagcaggag acagggttac cataacctgc 1260
 aaggccagtc agagtgttag taatgtatgt gcttggtacc aacagaagcc agggcagtct 1320
 cctacactgc tcatatccta tacatccagt cgctacgtc ggttccctga tcgcttcatt 1380
 ggcagtttatt tctgtcagca agattataat tctccctccgaa cgttccgggttgg aggcaccaagg 1440
 ctggaaatca aacggtaa 1500
 1518

FIG. 6 (SEQ ID NOS: 4 and 8)

Leader / 5T4 scFv / IgG DNA and deduced protein sequence

CTCGAGCCACCATGGGATGGAGCTGTATCATCCTCTTGGTAGCAACAGCTACAGGTGTCCACTCCGAGGTCCAGCTG
 M G W S C I I L F L V A T A T G V H S E V Q L

CAGCAGTCTGGACCTGACCTGGTGAAGCTGGGCTTCAGTGAAGATACTCTGCAAGGCTCTGGTTACTCATTCACTGG
 Q Q S G P D L V K P G A S V K I S C K A S G Y S F T

CTACTACATGCACCTGGGTGAAGCAGAGCCATGGAAAGGCCTTGAGTGGATTGGACGTATTAATCTAACAAATGGTGT
 G Y Y M H W V K Q S H G K S L E W I G R I N P N N G V

CTCTCTACAACCAGAAAATTCAAGGACAAGGCCATTAACTGTAGACAAGTCATCCACACGCCATGGAGCTCCGC
 T L Y N Q K F K D K A I L T V D K G S T T A Y M E L R

AGCTGACATCTGAGGACTCTGGGTCTATTACTGTCAAGATCTACTATGATTACGAACATGGTATGGACTACTGGGG
 S L T S E D S A V Y Y C A R S T M I T N Y V M D Y W

TCAAGTAACUTTCAGTCACCGTCTCTCAGGTGGTGGGGAGCGGTGGTGGCGGCACTGGCGGGCGGATCTAGTATTG
 G Q V T S V T V S S G G G G S G G G G T G G G G S S I

TGATGACCCAGACTCCCACATTCCCTGCTTCACTGAGGAGACAGGGTACCTAACCTGCAAGGCCAGTCAGAGTGT
 V M T Q T P T F L L V S A G D R V T T T C K A S Q S V

AGTAATGATGTAGCTGGTACCAACAGAAGCCAGGGCAGTCCTCACACTGCTCATATCTATACATCCAGTCGCTACGC
 S N D V A W Y Q Q K P G Q S P T L L I S Y T S S R Y

TCCACTCCCTCATCGCTTCATTGGCAGTGGATATGGGACGGATTTCACCTTACCATCAGCACCTTGCAAGGCTGAAGGCC
 A G V P D R F I G S G Y G T D F T F T I S T L Q A E D

TGGCAGTTTATTCGTCACTGAAAGATTATAATTCTCTCGACGTTCTGGTGGAGGGCACCAAGCTTGAATCAAACGGGCC
 L A V Y F C Q Q D Y N S P P T F G G G G T K L E I K R A

TCCACCAAGGGCCCATCGGTCTTCCCCCTGGCACCCCTCCAAGAGCACCTCTGGGGCACAGCGGCCCTGGCTGCC
 S T K G P S V F P L A P S S K S T S G G T A A L G C

GGTCAAGGACTACTTCCCGAACCGGTGAGGGTCTGGGACTCTGGGACCTCTGGGACGGCTGGGACCCAGACCTAC
 L V K D Y F P E P V T V S W N S G A L T S G V H T F P

CTGTCCTACAGTCCTCAGGACTCTACTCCCTCAAGCAGCTGGTGGACCGTGGCCCTCCAGCAGCTGGGACCCAGACCTAC
 A V L Q S S G L Y S L S S V T V P S S S L G T Q T Y

ATCTGCAACGTGAATCACAAGCCAGCAACACCAAGGTGGACAAGAAAGTTGAGCCAAATCTGTGACAAAACAC
 I C N V N H K P S N T K V D K K V E P K S C D K T H

ATGCCACCGTGGCCAGCACCTGAACCTGGGGGACCTCAAGCTCTGGGACTCTGGGACCCAAACCAAGGACACCCCTCA
 T C P P C P A P E L L L G G P S V F L F P P K P K D T L

TGATCTCCGGACCCCTGAGGTACATGCGTGGTGGACGTGAGCCACGAAGACCCCTGAGGTCAAGTCAACTGGTAC
 M I S R T P E V T C V V V D V S H E D P E V K F N W Y

GTGGACGGCTGGAGGTGCATAATCCAAGACAAAGCCGGAGGAGCAGTACAACAGCACGTACCGTGTGGTCAAGCG
 V D G V E V H N A K T K P R E E Q Y N S T Y R V V S

CCTCACCGTCTGCACCAGGACTGGCTGAATGCCAAGGAGTACAAGTGAAGGTCTCCAACAAAGCCCTCCAGGCC
 V L T V L H Q U W L N G K E Y K C K V S N K A L P A P

TCGAGAAAACCATCTCCAAAGCCAAGGGCAGCCCCGAGAACACCAGGTGTACCCCTGCCCATCCGGATGAGCTG
 I E K T I S K A K G Q P R E P Q V Y T L P P S R D E M

ACCAAGAACCGGTCAACCTGGCTGGTCAAAGGCTCTATCCCGACATGCCGTGGAGTGGAGAGCAATGG
 T K N Q V S L T C L V K G F Y P S D I A V E W E S N

GCAGCCGGAGAACAAACTACAAGAACACGCCCTCCCGTGTGGACTCCGACGGCTCTTCTCCCTATAGCAAGCTCACCG
 G Q D E N N Y K T T P P V L D S D G C F F L Y O K L T

TGGACAAAGAGCAGGTGGCAGCAGGGAAACGTCTCTCATGCTCCGTGATGCATGAGGCTCTGCACAAACCAACTACAGCAG
 V D K S R W Q Q G N V F S C S V M H E A L H N H Y T Q

AAGAGCCCTCTCCCTGTCCCCGGTAAATGACTCGAG
 K S L S L S P G K .

FIG. 7 (SEQ ID NO: 12)

tcgagccac	catggatgg	actgttatca	tcccttttctt	ggtagcaaca	gctacaggtg	60
tccactccga	ggtcagctg	cagcagtctg	gacctgacct	ggtaagct	ggggcttcag	120
tgaagatata	ctgcaaggct	tctggtaact	cattcaactgg	ctactacatg	cactgggtga	180
agcagagcca	tggaaagagc	cttgagtgga	ttggacylal	laalcclaac	aatggtgtta	240
ctctctacaa	ccagaaattc	aaggacaagg	ccatattaac	tgtagacaag	tcatccacca	300
cagccatcacat	ggagctccgc	agccgtacat	ctgaggactc	tgccgtctat	tactgtcaa	360
gatctactat	gattacgaac	tatgttatgg	actactgggg	tcaagtaact	tcagtcaccg	420
tctcttcagg	ttgggtggg	agccgtgggt	ggccgtactgg	cggccgggaa	tctagtattt	480
tgatgaccca	gactcccaca	ttcctgttgc	tttcagcagg	agacagggtt	accataaac	540
gcaaggccag	tcagagtgtg	agtaatgatg	tagcttggta	ccaaacagaag	ccagggcagt	600
ctcctacact	gctcatatcc	tatacatcca	qtcgctacgc	tggagtccct	gatcgcttca	660
ttggcagtgg	atatgggacg	gatttcactt	tcaccatcag	cactttgcag	gctgaagacc	720
tggcagtta	tttctgtcag	caagattata	attctccccc	gacgttcggt	ggagggcacca	780
agcttgaat	caaaggccc	ttcacacaga	gcccatccgt	cttccccctt	acccgcgtct	840
gaaaaaat	teccctcaat	ggccatcccg	tgactctggg	ctgctggcc	acgggtaact	900
tcccgagcc	gggtatggtg	acctgggaca	caggctccct	caacgggaca	atcatgacct	960
taccagccac	caccctcacg	ctctctggtc	actatggccac	catcgttgc	ctgaggctt	1020
cggttgcgtg	ggccaagcag	atgttccatc	ggcgtgtggc	acacactccaa	tcgtccacag	1080
auuyylyca	caacaaaacc	ttcagcgtct	gctccaggga	cttcacccccc	cccacccgtga	1140
agatcttaca	gtcgttctgc	gacggcggcg	ggcacttccc	ccggaccatc	cagctcctgt	1200
gcctcgctc	tgggtacacc	ccaggggacta	tcaacatcac	ctggctggag	gacgggcagg	1260
tcatggacgt	ggacttgc	accggctctca	ccacggcagga	gggtgagctg	gcctccacac	1320
aaagcgaact	cacccctcage	cagaagcact	ggctgtcaga	ccgcacccatc	acctgcccagg	1380
tcacatata	aggtcacacc	tttgaggaca	gcaccaagaa	gtgtcagat	tccaaacccga	1440
gaggggttag	cgcc taccta	agccggccca	gcccgttca	cctgttcatc	cgcaagtgc	1500
ccacgatcac	ctgtctggt	gtggacccgt	ccacccggaa	ggggaccgtg	aactgtaccc	1560
ggtcccgggc	cagtgggaag	cctgtgaacc	actccacccag	aaaggaggag	aagcagcgc	1620
atggcacgtt	aaccgtcacg	tccaccctgc	cggtggcac	ccgagactgg	atcgaggggg	1680
agacctacca	gtgcagggtg	acccacccccc	acctgcccag	ggccctcatg	cggtccacga	1740
ccaagacag	cgccccgcgt	gtgtccccgg	aaglelaly	ylllyuyacy	ccyyaglyyc	1800
cggggagccg	ggacaagcgc	acccctgcgtt	gcctgtatcca	gaacttcatg	cctgaggaca	1860
tctctgttgc	gtgggtgcac	aacggaggtgc	agctcccgga	cgccggcacc	agcagcgcgc	1920
agccccgca	gaccaagggc	tccggcttct	tctgttctcag	ccgcctggag	gtgaccagg	1980
ccgaatggga	gcagaaaagat	gagttcatct	ggcgtcagat	ccatgaggca	gcgagccccc	2040
caacagaccgt	ccagcggagcg	gtgtctgtaa	atcccggtaa	atqagaaqctc		2090

FIG. 8 (SEQ ID no: 13)

atggcttgc	attgtcagtt	gatgcaggat	acaccactcc	tcaagttcc	atgtccaagg	60
ctcattttc	tcttgtgct	gctgattcg	cttcacaag	tgtcttcaga	tgttgatgaa	120
caactgtcca	agtcaagtga	agataaggta	ttgctgcctt	gccgttacaa	ctctccgcat	180
gaagatgagt	ctgaagaccg	aatctactgg	caaaaacatg	acaaagtgg	gctgtctgtc	240
attgctgga	aactaaaagt	gtggcccgag	tataagaacc	ggactttata	tgacaacact	300
acctactctc	ttatcatctt	ggccctggtc	cttccagac	ggggcacata	cagctgtgtc	360
gttcaaaaga	aggaaaggang	aargtatgaa	gtttaaacact	tgcgttttagt	aaagttgtcc	420
atcaaagctg	actttcttac	ccccaaacata	actgagtcg	gaaacccatc	tgcagacact	480
aaaaggattt	cctgtttgc	ttccgggggt	ttcccaaagc	ctcgcttc	ttggttgaa	540
aatggaagag	aattacctgg	catcaatacg	acaatttccc	aggatcctga	atctgaattg	600
tacaccatta	gttagccaact	agatttcaal	accaulcyc	accacaccaal	laaylytctc	660
attaaatata	gagatgtctc	ctgttcagag	gacttcacat	ggaaaaaacc	cccagaagac	720
cctctgtata	gcaagcccg	gggtgggggg	agccgtgggt	cgccgcgttg	cggcggccga	780
actagtaata	gtgactctga	atgtccccct	tcccacatg	gttactgcct	ccatgtatgt	840
gtgtgcatgt	atattgaagc	attggacaag	tatgcatgca	actgtgttgt	tggctacatc	900
ggggagcgat	gtcagtaccg	agacctgaag	tggtgaaaac	tgcgc		945

FIG. 20 (SEQ ID NO: 35 and 36)

pKLink - the $(\text{Gly}_4\text{Ser})_3$ linker in pBluescript II SK (pBS II)

FIG. 21 (SEQ ID NO: 37)

An scFv and leader sequence in pBSII

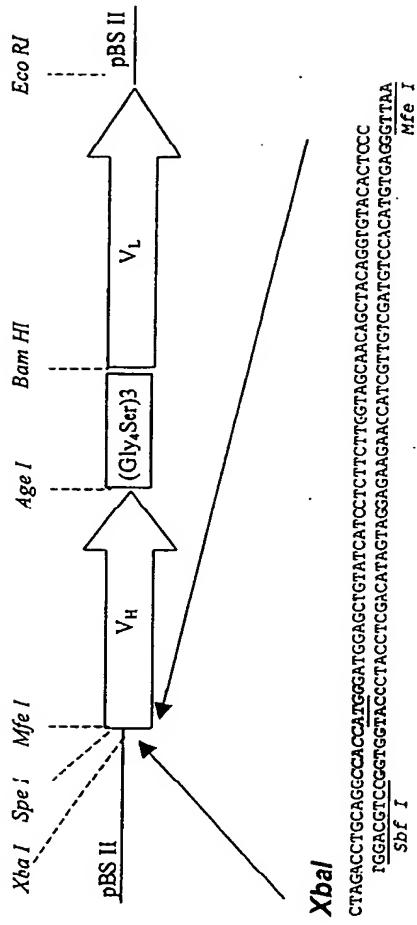


FIG. 26 (SEQ ID nos: 14 and 15)

Canine 5T4 Coding Sequence

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ATGCCCTGGGGGTGCTCCGGGGCCCCGCCGGGACGGCGGTTGCGGCTGGCGCGCTGGCGCTGGTGCCTGGG 80
M P G G C S R G P A A G D G R L R L A R L A L V L L

CTGGGTCTCCTCGCTCGCTCACCTCTGGCGCCCTCCGCCGCCCTCCACGTCGCCGCCCTCCGCCGTCCG 160
G W V S S S S L T S W A P S A A A S T S P P A S A A S

CCCCGCCCGCTGCCGGCCAGTGCCCCAGCCTTGCAGTGCTCGAGGCCACGGTCAAGTGCCTTAACCGC 240
A P P P L P G Q C P Q P C E C S E A A R T V K C V N R

AACCTGACCAGGTGCCCGGGACCTGCCCTTACGTGCGCAACCTCTTCCTCACGGGCAACCAGCTGGCGGTGCTGCC 320
N L T E V P A D L P P Y V R N L F L T G N Q L A V L

CCCCGGCGCCTCGCCGCCGGCCGCTGGCCGAGCTGGCCGCGCTCAACCTGAGCGGCAGCAGCCTGCGGGAGGTGT 400
P P G A F A R R P P L A E L A A L N L S G S S L R E V

GCGCCGGCGCCTTCGAGCACCTGCCAGCGCTGCGCCAGCTCGACCTCAGCCACAACCCGCTGGCAACCTCAGCGCTTC 480
C A G A F E H L P S L R Q L D L S H N P L G N L S A F

GCCTTCGGCGAGCGACGCCAGCCGCTGGGGGGCTGGTGGAGCTGATGGCTGAACACATCGTCCCCCGA 560
A F A G S D A S R S G P S P L V E L M L N H I V P P

CGACCGGGCAGAACCGGAGCTCGAGGGCATGGTGGCGGCTGCCCTCCGAGCGGGCCGCGCTCGCGGCTGCAGT 640
D D R R Q N R S F E G M V A A A L R A G R A L R G L O

GCCTGGAGCTGCCGGCAACCGCTTCCTACTTGCCCTCGCACGTCCTGGCCAGCTACCCGGCTCCGGCACCTGGAC 720
C L E L A G N R F L Y L P R D V L A Q L P G L R H L D

CTGCGCAACAACTCCCTGGTAGGCTCACCTACGTGTCCTCCGCAACCTGACGCACTTGGAGAGCCTCCACCTGGAGGA 800
L R N N S L V S L T Y V S F R N L T H L E S L H L E

CAACGCCCTCAAGGTCTTACAACGCCACCTGGCGAGCTGCAGAGCTGCCACGTCGGGTCTTCCGGACAACA 880
D N A L K V L H N A T L A E L Q S L P H V R V F L D N

ACCCCTGGGTCTGCGATTGTCACATGGCAGACATGGTGGCTGGCTCAAGGAGACAGAGGTGGTGGCGGGCAAAGCCGG 960
N P W V C D C H M A D M V A W L K E T E V V P G K A G

CTCACCTGTGCAATTCCGGAGAAAATGAGGAATCGGGCCCTTGGAACTCAACAGCTCCCACCTGGACTGTGACCTAT 1040
L T C A F P E K M R N R A L L E L N S S H L D C D P

CCTCCCTCCATCCCTGCAGACTTCTTATGCTTCTAGGTATTGCTTAGGCTGATAGGCGCCATCTCCTACTGGTTT 1120
I L P P S L Q T S Y V F L G I V L A L I G A I F L L V

TGTATTTGAACCGCAAGGGATAAAGAAGTGGATGCATAACATCAGAGATGCCTGCAGGGATCACATGGAAGGGTATCAC 1200
L Y L N R K G I K K W M H N I R D A C R D H M E G Y H

TACAGATAACGAAATCAATGCAGACCCAGTTAACAAACCTCAGTTCAATTGGATGCTGA 1263
Y R Y E I N A D P R L T N L S S N S D V .

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